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AUTHOR Harvey, David W.
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ABSTRACT

This study was designed to examine the validity and test-retest reliability of Holland's Vocational Preference Inventory (VPI) for 61 adult women. The VPI was administered at the beginning of a group guidance program and the preference for Holland's six personality styles - intellectual, conventional, enterprising, realistic, social, artistic - were correlated with selected scales on four criterion tests. The results revealed statistically significant correlations supporting the validity of Holland's VPI for use with adult women. The social and the artistic scales of the VPI remained in doubt as to their validity for this sample. This sample seemed to gravitate to the conventional occupations, and these women tended to reject the nurturant role. (Author)

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An Examination of the Validity of Holland's Constructs for Adult Women

David W. Harvey
Continuing Education Services
The University of Connecticut

The phrase "career development process" suggests a continuing, on-going kind of activity over the life span. It seems clear that vocational psychologists and others are in agreement that career planning, occupational choosing and/or personal job development are activities that embrace the total life span and can not be confined to a single period of one's life. This is especially significant when considering the career development process among women (Mathews, 1972). As stated elsewhere in this symposium, counselors, to be effective, must understand the career development process for women. The results of the study reported here illustrate in part the developmental nature of the notion of career; for, my data were gathered, from an older group of women.

For many women, the notion of career or marriage as a life-style has shifted to include career and marriage. In addition, the vocational guidance which an older woman received in her high school or college years may not have fully prepared her for coping with this shift. Educatiors and counselors are increasingly being challenged to provide meaningful guidance services for adult women who are coping with a change in life-style, lack of self-knowledge and confidence, and lack of information about the world of work (Lewis, 1965; Berry, 1966; Wrenn, 1962; Dolan, 1966).

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Holland's theory of personality (Holland, 1959; 1966) is also a theory of vocational selection and may have potential for use with adult women in that it may help to provide a theory-based rationale for more effective vocational guidance with this age group. Valid for high school and college age populations (Holland, 1962, 1963; Osipow, Ashby and Wall, 1966; Ashby, Wall and Osipow, 1966), the theory's validity for adult women depends upon the additional accumulation of data which support the measurement of Holland's six "styles." According to the theory, the six styles represent the ways in our society in which people solve problems and interact with their environments. The six styles, Realistic (R), Intellectual or Investigative (I), Social (S), Conventional (C), Enterprising (E), and Artistic (A) are fully defined elsewhere (Holland, 1965, 1966). Data is needed on the construct validity of Holland's Vocational Preference Inventory (VPI) which is the chief measurement instrument for the six "styles" (Osipow, 1968, pp. 39-68). If the VPI, and ultimately the theory, are shown to have validity for describing the personalities and vocational behavior of adult women, then progress toward more effective vocational testing and guidance services for women will be served.

The central question asked in this study was: Are Holland's personality types, as identified by the VPI, valid or meaningful descriptors of women's personality styles and vocational interests? Essentially, this question involves an examination of the construct validity of the VPI.

Method and Procedures

Sample. The sample consisted of 61 women enrollees in a 1970-71 adult testing and guidance program called Find Your Way (FYW) conducted by Continuing Education for Women (CEW) of The University of Connecticut.

The mean age of enrollees was 40.7. The lower levels of a socio-economic scale were not as well represented in the group as were the middle and higher levels. 78 per cent were married. 32 per cent had 12 years or less of education while 29 per cent were college graduates. 36 per cent had some college. The average number of years worked by the women was 7.32; the group's average number of elapsed years since the last job was 10.26. Most of the sample was unemployed. Average number of children per wife was three. And, the women tended to fall into the R and C classifications as measured by the VPI at the time of enrollment.

Instrumentation. To examine the construct validity of the VPI for adult women, the instrument was administered at the outset of the guidance program in order to correlate preference for the six styles with vocational preferences and personality characteristics as measured by other similar standardized instruments. Certain correlational relationships were directionally predicted on an *a priori* basis between the VPI occupational scales and selected scales of the criterion measures by studying the definitions of the VPI scales and relating these in a deductive manner to what appeared to be similar scales on the criterion tests. The four criterion tests were: the Strong Vocational Interest Blank for Women (SVIB-W), the Edwards Personal Preference Schedule (EPPS), the Allport-Vernon-Lindzey Study of Values (SOV), and the Differential Aptitude Tests (DAT). For example, a positive r was predicted between the R type and the "Engineer" scale on the SVIB-W, the "Deference" scale on the EPPS, the "Economic" scale on the SOV and "Numerical Ability" (NA)

and "Mechanical Reasoning" (MR) scales on the DAT. Negative r's were predicted between VPI R and EPPS "Affiliation" and "Intraception," SOV "Social" and DAT "Verbal Reasoning" (VR). Table 1 contains all the predicted correlational relationships between the VPI and the criterion scales selected in the foregoing manner.

Analysis. The statistical hypothesis tested was that statistically significant positive and negative correlations would exist between the six scales on the VPI and the selected criterion scales of the SVIB-W, EPPS, SOV and DAT. Pearson r's were computed on these and on other scales of the criterion tests shown in Table 1.

Results and Discussion

Table 1 also contains the r's of the VPI occupational and criterion scales. Both the predicted and the supplementary r's are shown. As shown in the Table the Intellectual or Investigative, Conventional and Enterprising categories were meaningful descriptors of women's personality styles and occupational interests; a substantial number of statistically significant positive and negative r's were found between the VPI scales and scales on the criterion measures. While the Realistic, Social and Artistic categories had a number of meaningful relationships a larger number of predicted relationships were not found to be significantly correlated. For this reason validity for these three remained in doubt.

It is possible, of course, that the Realistic, Social and Artistic types are valid: This population of women may not be representative. Moreover, the a priori predictions that were made with regard to the

TABLE I

PREDICTED CORRELATIONAL RELATIONSHIPS BETWEEN HOLLAND'S SIX STYLES AND SELECTED SCALES ON FOUR CRITERION TESTS, AND COMPUTED CORRELATIONS[1]

HOLLAND Type	CRITERION TESTS											
	SVIB-W			EPPS			SOV			DAT		
	Scale	Prdtn	r	Scale	Prdtn	r	Scale	Prdtn	r	Scale	Prdtn	r
Real	ENGINEER	+	34**	DEFERENCE	+	-07	ECONOMIC	+	16	NA	+	08
	Cmptr Prgrmr		26*	AFFILIATION	-	-01	SOCIAL	-	-31**	VR	-	09
	Lab Tech		27*	INTRACEPTION	-	-20	Theoretical		34**	NR	+	34**
	Dentist		30*	Nurturance		-24	Aesthetic		-15	Vr + Na		09
	Math Sci Tchr		20	Aggression		21	Political		14	Abstr Reas		19
	Housewife		-14	Dominance		05				Space Rel		13
				Change		-07						
Int	PHYSICIAN	+	28*	ACHIEVEMENT	+	39**	THEORETICAL	+	27*	NA	+	29*
	MATH SCI TCHR	+	27*	NURTURANCE	-	-23*	SOCIAL	-	-18	VR	+	27*
	Dentist		31*	Autonomy		08	Economic		-07	Vr + Na		31*
	Lab Tech		33**	Affiliation		-27*	Aesthetic		-10	Abstr Reas		19
	Cmptr Prgrmr		48**	Intraception		-01	Political		-02	Space Rel		22
	Housewife		-33**									
	Author		04									
Soc	SOCIAL WKR	+	30**	NURTURANCE	+	08	SOCIAL	+	0	VR	+	-05
	PSYCHOLOGIST	+	10	AUTONOMY	-	-17	ECONOMIC	-	03	NA	-	-05
	Soc Sci Tchr		08	Intraception		16	Theoretical		-03	Vr + Na		-05
	Elem Tchr		16	Dominance		-01	Aesthetic		-05			
	Housewife		03	Succorance		-24						
	Home Eco Tchr		19	Affiliation		-08						
	Dietician		-06	Exhibition		14						
	Nurse		10									
	Speech Path		12									
Conv	STENO-SECRTY	+	28*	DEFERENCE	+	20	ECONOMIC	+	45**	NA	+	16
	OFFICE WKR	+	39**	DOMINANCE	-	10	THEORETICAL	-	14	VR	0	03
	Cmptr Prgrmr		16	AUTONOMY	-	-22*	Political		23	Vr + Na		12
	Housewife		22	Order		07	Social		-26*	Mr		03
				Aggression		01	Aesthetic		-29*	Abstr Reas		-28*
				Abasement		06				Space Rel		-11
				Intraception		-23						
Ent	BUYER	+	37**	ACHIEVEMENT	+	25*	ECONOMIC	+	26*	VR	+	-01
	LIFE INS SALES	+	40**	NURTURANCE	-	-21**	AESTHETIC	-	-15	NA	-	-01
	Occup Therapy		-01	Endurance		-01	Social		-40**	Vr + Na		-01
	Housewife		-06	Dominance		17	Political		35**			
				Aggression		17	Theoretical		-04			
				Change		28*						
				Intraception		-42**						
				Exhibition		40**						
Art	ARTIST	+	08	ORDER	-	-30**	AESTHETIC	+	30**	VR	+	09
	AUTHOR	+	15	AUTONOMY	+	03	POLITICAL	-	02	Na	-	03
	Music Tchr		13	Achievement		30*	Economic		-14	Vr + Na		06
	Mus Perfrm		37**	Intraception		-21	Social		-24	Abstr Reas		14
	Librarian		-11	Change		02	Theoretical		22	Space Rel		03
	English Tchr		29*	Abasement		-04						
	Housewife		-16	Nurturance		-12						

[1]All Entries have been multiplied by 100
*Significant at the .05 level
**Significant at the .01 level
Scales in caps denote scales on which directional predictions were made.

relationships between the criterion scales and these three Holland's "styles" may represent errors of judgement on the part of the investigators. However, it does seem that there are problems with the Realistic type, for example, in that the occupational choices presented on the VPI for this type are "masculine-aggressive" in nature. Women may choose "Fish and Wildlife Specialist," "Surveyor," and "Radio Operator" but rarely the others in that category. If there is a "Realistic" adult woman we need to know more about her vocational interests and, more important, her personality characteristics. The same kind of observation may be made for the Social type: We need to know more about the adult woman's interests as related to Holland's definition of Social, since there may be several kinds of subtypes within this category.

The Social type found little statistically significant support in the data for its validity as a descriptor of the women's interests and personality styles in this sample. SOCIAL WORKER was the only predicted SVIB-W occupational scale that was significantly correlated to Social. None of the EPPS, SOV or DAT predicted or supplementary scale correlations with VPI Social supported validity for this sample of adult women in terms of statistical significance.

The original correlation matrix (not presented here) for VPI Social revealed two categories of high, significant intercorrelations among the SVIB-W occupational scales: (1) SOCIAL WORKER, PSYCHOLOGIST, Social Science Teacher and Speech Pathologist were all positively and significantly intercorrelated; and, (2) Elementary Teacher, Housewife, Home Economics Teacher, Dietician and Nurse were all positively and significantly intercorrelated. Of the first group, PSYCHOLOGIST and Speech

Pathologist were significantly and negatively correlated with all in the second group except Nurse; and, SOCIAL WORKER was also negatively correlated with these but only the r with Dietician was significant. VPI Social, again, was only correlated significantly to SOCIAL WORKER, in the first group.

The strength of the correlation between the VPI Social and the SVIB-W SOCIAL WORKER was expected and found. However, the lack of strength of relationship between VPI Social and the other criterion scales was not expected. It was possible that VPI Social was not tapping commonly assumed attributes related to the Social type, at least for this sample of adult women. For example, the group as a whole was low on EPPS NURTURANCE (21st percentile when compared to national norms (Edwards, 1959). It would be expected that VPI Social would correlate highly with NURTURANCE, but, it did not, nor did NURTURANCE correlate with SVIB-W SOCIAL WORKER. However, NURTURANCE did correlate positively and significantly with Elementary Teacher, Housewife, Home Economics Teacher and Nurse. This suggests that there may be at least two Social "types": Social in the sense of social science research or teaching and Social in the sense of service to others. Other studies would seem to indicate a similar inference (Osipow and Ashby, 1968; Holland and Whitney, 1968). While these women tended to reject the nurturant role at this stage of their lives, they were more accepting of the research or teaching role. This has obvious implications for the vocational guidance of mature women.

With the Artistic type, more data will help clarify the meaning of this category for adult women. Although the evidence for the validity of Artistic for this sample was questionable it was by no means entirely absent.

Evidence was also provided that the SVIB-W scales - Computer Programmer, Lab Technician and Math Science Teacher - were more highly correlated to VPI Intellectual than to VPI Realistic. SVIB-W Dentist seemed to be strongly related to both the Intellectual and Realistic category.

Conclusions

The findings indicated that Holland's I, C and E "types" were valid and meaningful descriptors of women's personality characteristics and vocational interests. Questions and reservations were raised as to the conceptual meaning of the R, S and A types with this sample. The VPI appeared to have sufficient validity with this female adult sample to be used as an economical guidance test within Holland's theory; it must be used with the knowledge that several of the types seem to have limited validity.

The data gathered did not indicate the antecedent factors responsible for the development of a style. More demographic and personal history data collected from larger groups of adult women would help in the identification of factors related to a style. This would contribute to the predictive power of the constructs in the theory.

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